

CHAI  
Appl. No. 10/567,927  
November 26, 2008

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AMENDMENTS TO THE CLAIMS:

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This listing of claims will replace all prior versions, and listings, of claims in the application:

1-22 (cancelled).

23 (currently amended). A polymer blend comprising

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

- (i) a density in the range 0.905 to 0.940 g cm<sup>-3</sup>,
- (ii) a melt elastic modulus G' (G'' = 500 Pa) in the range 10 to 150 Pa,

and

- (iii) a melt index (190°C/2.16 kg) in the range 5 to 50 g/10 ml, and

(b) from 1 - 99% by weight of a low density polyethylene (LDPE) polymer comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g cm<sup>-3</sup>

wherein the sum of (a) and (b) is 100 %.

24 (currently amended). A polymer blend according to claim 23 wherein the copolymer of component (a) has a density in the range 0.907 to 0.915 g cm<sup>-3</sup>.

25 (currently amended). A polymer blend according to claim 23 wherein the copolymer of component (a) has a melt index in the range 12 to 50 g/10 ml.

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26 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a melt elastic modulus  $G'$  in the range 11 to 90 Pa.

27 (currently amended). A polymer blend according to claim 23 wherein the copolymer of component (a) has a flow activation energy ( $E_a$ ) in the range 28 to 50 kJ/mol.

28 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a  $M_w/M_n$  in the range 2 to 3.5.

29 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) exhibits more than one differential scanning calorimetry (DSC) melting peaks between 30° and 150°C.

30 (currently amended). A polymer blend according to claim 23 wherein the LDPE of component (b) has a melt index in the range 0.1 to 25 g/10 ml.

31 (previously presented). A polymer blend according to claim 23 wherein the LDPE of component (b) has a melt elastic modulus  $G'$  in the range 80 to 200 Pa.

32 (previously presented). A polymer blend according to claim 23 wherein the ratio of component (a) to component (b) is in the range 60:75 to 40:25 by weight.

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33 (previously presented). A polymer blend according to claim 23 wherein the blend has a melt elastic modulus  $G'$  in the range 30 to 200 Pa.

34 (previously presented). A polymer blend according to claim 33 wherein the blend has a melt elastic modulus  $G'$  in the range 30 to 200 Pa.

35 (previously presented). A polymer blend according to claim 34 wherein the blend has a melt elastic modulus  $G'$  in the range 60 to 120 Pa.

36 (previously presented). A polymer blend according to claim 35 wherein the melt elastic modulus  $G'$  is in the range 75-100 Pa.

37 (currently amended). A polymer blend comprising

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

(iv) a density in the range 0.905 to 0.940 g  $\text{cm}^{-3}$ ,

(v) a melt elastic modulus  $G'$  ( $G''= 500$  Pa) in the range 10 to 150 Pa,

and

(vi) a melt index ( $190^{\circ}\text{C}/2.16\text{ kg}$ ) in the range 5 to 50 g/10 ml, and

(b) from 1 - 99% by weight of a low density polyethylene (LDPE) polymer comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g  $\text{cm}^{-3}$ , and

(c) from 0 - 98% by weight of a copolymer of ethylene and an alpha-olefin having 3 to 10 carbon atoms or a low density polyethylene (LDPE)

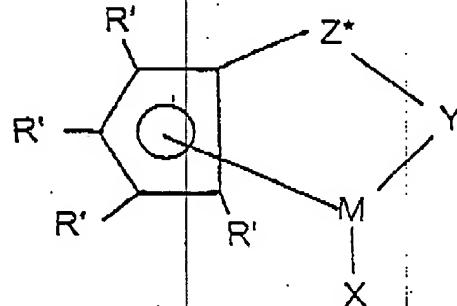
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wherein the sum of (a), (b) and (c) is 100 %.

38 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) is prepared by use of a catalyst system comprising a transition metal compound.

39 (previously presented). A polymer blend according to claim 38 wherein the transition metal compound is a metallocene.

40 (previously presented). A polymer blend according to claim 39 wherein the metallocene has the general formula



wherein:-

R' each occurrence is independently selected from hydrogen, hydrocarbyl, silyl, germyl, halo, cyano, and combinations thereof, said R' having up to 20 nonhydrogen atoms, and optionally, two R' groups (where R' is not hydrogen, halo or cyano) together form a divalent derivative thereof connected to adjacent positions of the cyclopentadienyl ring to form a fused ring structure;

X is a neutral  $\eta^4$  bonded diene group having up to 30 non-hydrogen

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atoms, which forms a  $\pi$ -complex with M;

Y is -O-, -S-, -NR\*-, -PR\*-,

M is titanium or zirconium in the + 2 formal oxidation state;

Z\* is SiR\*<sub>2</sub>, CR\*<sub>2</sub>, SiR\*<sub>2</sub>SIR\*<sub>2</sub>, CR\*<sub>2</sub>CR\*<sub>2</sub>, CR\*=CR\*, CR\*<sub>2</sub>SIR\*<sub>2</sub>, or

GeR\*<sub>2</sub>, wherein:

R\* each occurrence is independently hydrogen, or a member selected from hydrocarbyl, silyl, halogenated alkyl, halogenated aryl, and combinations thereof, said R\* having up to 10 non-hydrogen atoms, and optionally, two R\* groups from Z\* (when R\* is not hydrogen), or an R\* group from Z\* and an R\* group from Y form a ring system.

41 (previously presented). A polymer blend according to claim 38 wherein the copolymer is prepared in the gas phase.

42 (previously presented). A polymer blend according to claim 23 wherein the low density polyethylene (LDPE) of component (b) is prepared by a high pressure process.

43 (currently amended). An extrusion coating comprising a polymer blend comprising

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

(i) a density in the range 0.905 to 0.940 g cm<sup>-3</sup>,

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(ii) a melt elastic modulus  $G'$  ( $G'' = 500$  Pa) in the range 10 to 150 Pa, and  
(iii) a melt index ( $190^{\circ}\text{C}/2.16\text{ kg}$ ) in the range 5 to 50 g/10 ml, and  
(b) from 1 - 99% by weight of a low density polyethylene (LDPE) polymer  
comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g  $\text{cm}^{-3}$   
wherein the sum of (a) and (b) is 100 %.

44 (currently amended). An extrusion coating comprising a polymer blend  
comprising

(a) 1-99% by weight of a copolymer of ethylene and an alpha olefin having  
from 3 to 10 carbon atoms, said copolymer having  
(i) a density in the range 0.905 to 0.940 g  $\text{cm}^{-3}$ ,  
(ii) a melt elastic modulus  $G'$  ( $G'' = 500$  Pa) in the range 10 to 150 Pa,  
and  
(iii) a melt index ( $190^{\circ}\text{C}/2.16\text{ kg}$ ) in the range 5 to 50 g/10 ml,  
(b) from 1-99% by weight of a low density polyethylene (LDPE) polymer  
comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g  $\text{cm}^{-3}$ , and  
(c) from 0.98% by weight of a copolymer of ethylene and an alpha olefin having  
3 to 10 carbon atoms or a low density polyethylene (LDPE) polymer wherein the sum of  
(a), (b) and (c) is 100%.